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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/091,805	12/10/1998	TOSHIYUKI NAKATA	MATS:006	5347

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EXAMINER

NGUYEN, TUYEN T

ART UNIT PAPER NUMBER

2832

DATE MAILED: 03/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/091,805

Applicant(s)
Nakata et al.

Examiner
Tuyen Nguyen

Art Unit
2832



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 16, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-41 is/are pending in the application.
- 4a) Of the above, claim(s) 2, 6, 8, 9, 11, 12, 14-16, 21-28, 30, and 32-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7, 13, 17-19, 29, 31, 40, and 41 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION

Continued Prosecution Application

1. The request filed on 1/16/02 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/091,805 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5, 7, 13, 29, 31 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art of figure 47 in view of Smith [US 5,175,525].

The applicant admitted prior art of figure 47 discloses a choke coil comprising:

- a closing ferrite magnetic core including:

- a first E-shaped magnetic core [10] having a center magnetic leg [7], outer magnetic legs [8], and a common magnetic yoke [9]; wherein the center magnetic leg has a circle cross section; and

- a second E-shaped magnetic core [10] in contact with the first magnetic core.

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- a magnetic gap provided between the center magnetic leg of the first magnetic core and the second magnetic core;

- a circle-shaped coreless coil [2] including a plate-type wire comprising a flat type wire [1], wherein the coreless coil is disposed around the center magnetic leg and separated therefrom by an insulating layer [11];

- additional insulating layer [11] provided between the coreless coil and the closing magnetic core; and

- inside and outside plate type terminals [5, 6] respectively coupled to inside and outside ends [3, 4] of the plate-type coreless coil, wherein the terminals are led outside of the closing magnetic core through an opening provided between the first and second magnetic core.

Applicant's admitted prior art of figure 47 discloses the instant claimed invention except for the common magnetic yoke including at least one of a notch, a through hole for the inside terminals to be led outside the closing magnetic core.

Smith discloses a transformer [see figure 4] comprising:

- a core structure including top and bottom core elements [212, 240], wherein each of the core element having at least a notch;

- primary and secondary windings [220, 230]; and

- terminals [236, 238] are led outside of the core structure through the notch [figure 5, column 7, lines 15-23].

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to use terminals/core arrangement of Smith in applicant's admitted prior art of figure 47 for the purpose of facilitating surface mounting.

Regarding claims 40-41, the particular thicknesses of the first and second common yokes would have been an obvious design consideration based on the desired inductance.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art of figure 47 in view of Smith as applied to claims 1, 3, 5, 7, 13, 29, 31 and 40-41 above, and further in view of Saitoh et al. [US 5,204,653].

Applicant's admitted prior art of figure 47 in view of Smith discloses the instant claimed invention except for the core being formed of manganese ferrite.

Saitoh et al. discloses a core structure for an induction device with the core being formed of manganese ferrite material [see column 8, lines 59-68].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use manganese ferrite material for the core structure of applicant's admitted prior art of figure 47 in view of Smith, as suggested by Saitoh et al., for the purpose of improving magnetic permeability.

5. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art of figure 47 in view of Smith, as applied to claim 1 above, and further in view of Mitsui et al. [US 4,352,080].

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The applicant admitted prior art of figure 47 in view of Smith discloses the instant claimed invention except for specifics structure of the insulating layer cooperate with the common magnetic yoke of the closing magnetic core.

Mitsui et al. discloses a ferrite core and bobbin structure for a choke coil comprising:

- a pair of E-shaped magnetic cores [10], wherein each of the magnetic cores [10] comprising a circular boss [12], a pair of outer walls [14, 16] and a pair tapered base plates [18, 20] with a notch [26] formed therebetween; and

- a bobbin [30] including a cylindrical pipe [30a] and a pair of flange [30b] , wherein the upper flange has a pair of walls [30b'] and the lower flange having a projection [30c] and a pair of terminal base plate [30d], wherein the cylindrical pipe engages the circular boss of the magnetic core.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use core/bobbin design of Mitsui et al. in applicant's admitted prior art of figure 47, as modified, for the purpose of facilitating manufacturing of the device.

Allowable Subject Matter

6. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Response to Arguments

7. Applicant's arguments with respect to claims 1, 3, 4, 5, 7, 13, 17-19, 29, 31 and 40-41 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Elvin Enad, can be reached at (703)308-7619. The fax number for this Group is (703)305-7724.

Any inquiry of a general nature or relating to the status of this application of proceeding should be directed to the Group receptionist whose telephone number is (703)308-0956.

TTN *TTN*
March 10, 2002

Tuyen T. Nguyen